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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,340	08/21/2000	Thomas Gray	8673-108 (8061-505 SJP/RS)	8168
22150	7590	10/21/2005	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			BRUCKART, BENJAMIN R	
			ART UNIT	PAPER NUMBER
			2155	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p align="center">09/642,340</p>	<p>Applicant(s)</p> <p align="center">GRAY ET AL.</p>	
	<p>Examiner</p> <p align="center">Benjamin R. Bruckart</p>	<p>Art Unit</p> <p align="center">2155</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-10,12-17 and 19-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1,2,7-10,15-17 and 19-25 is/are allowed.
- 6) ☒ Claim(s) 26-50 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 12-14, 27, 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20050826</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

### **Detailed Action**

#### **Status of Claims:**

Claims 1-2, 4-10, 12-17, 19-50 are pending in this Office Action.

Claims 3, 11 and 18 are cancelled.

Claims 27-50 are new.

Claim 17 is amended.

### **Information Disclosure Statement**

The information disclosure statement filed 8/26/05 has been considered.

### **Allowable Subject Matter**

Claims 1-2, 7-8 are allowed.

Claims 9-10, 15-16 are allowed.

Claims 17, 19-25 are allowed.

The following is an examiner's statement of reasons for allowance:

Independent Claims 1, 9, 17 among other things teach the limitations "a communications pathway for transmitting and receiving communications of said entities; a shared memory connected to said communications pathway for maintaining a tuple space on which said entities post and receive messages, said tuple space synchronized with a clock that defines discrete time intervals as reference points for operations on said tuple space, wherein said entities include at least one entity that asserts a tuple on said tuple space signaling its intention to perform an action and asserts an anti-tuple on said tuple space for evaluating

outcomes of said intention; and at least at one further entity which asserts an anti-tuple for detecting said intentions; said system further comprises a process in communication with at least one entity for monitoring said action and, in the event that said entity overrides the evaluated responses, reporting said action to an authority” in the environment of a system for controlling and coordinating activities among entities in an information and processes further defining the messages as tuples and anti-tuples and the duration parameter is a multiple of discrete time intervals in combination with the dependent claims.

### **Claim Objections**

Claims 4-6 and 12-14 are objected to because of the following informalities: They are dependent upon cancelled claims. Appropriate correction is required.

Claims 27 and 33 have some minor grammatical errors in the last line “at least at” which need correction. Claim 33 also recites an “action and asserts and anti-tuple...” which needs fixing.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites the limitation "said entities" in the body of the claim. There is insufficient antecedent basis for this limitation in the claim. Does applicant mean application or service entities? Said entities doesn't particular point out which applicant is referring too.

**Applicant's invention as claimed:**

***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 39-41, 45-50 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,974,420 by Lehman et al.**

Regarding claim 39, a method of call processing comprising the steps of:

- a) providing entities representative of call processing features (Lehman: col. 3, lines 21-30);
- b) providing a communications pathway for transmitting and receiving communications of said entities (Lehman: col. 1, lines 12-13; col. 3, lines 5-31);
- c) providing a tuple space in a shared memory connected to said communications pathway (Lehman: col. 1, lines 12-13; col. 3, lines 5-31);
- d) requesting advice by a first of said entities desirous of taking action of other said entities before taking said action by posting messages communicated on said tuple space to said other entities through said pathway (Lehman: col. 2, lines 6-7; col. 1, lines 24-35);
- e) providing advice as desired by said other entities responsive to said messages by posting responding messages communicated on said tuple space to said first of said entities (Lehman: col. 2, lines 6-7; col. 1, lines 24-35);
- f) evaluating said responding messages, if any, by said first of said entities (Lehman: col. 1, lines 24-35; col. 4, lines 23-31); and
- g) taking advised action by said first of said entities after said evaluating said responding message (Lehman: col. 1, lines 24-35; col. 4, lines 23-31).

Regarding claim 40, the method of claim 39, wherein said advised action ignores or overrides said responding messages (Lehman: col. 6, lines 28-35; ignore).

Regarding claim 41, the method of claim 39 wherein said messages and said responding messages are in the form of tuples and anti-tuples (Lehman: col. 5, lines 20-41).

Regarding claim 45, the method of claim 39 wherein said entities are software processes operating in memory under control of a processor (Lehman: col. 4, lines 15-16).

Regarding claim 46, the method of claim 39 wherein said entities are represented by agents (Lehman: col. 3, lines 21-30).

Regarding claim 47, the method of claim 39 wherein said communication pathway is a network or bus (Lehman: col. 4, lines 15-16).

Regarding claim 48, a method for controlling and coordinating activities among entities in an information and process environment (Lehman: col. 3, lines 21-30) comprising the steps of:

a) providing a communications pathway for transmitting and receiving communications of said entities (Lehman: col. 2, line 4; col. 3, lines 61-67);

b) requesting advice by a first of said entities desirous of taking action of other said entities before taking said action by posting messages communicated on said tuple space to said other entities through said pathway (Lehman: col. 2, lines 6-7; col. 1, lines 24-35);

c) providing advice as desired by said other entities responsive to said messages by posting responding messages communicated on said tuple space to said first of said entities (Lehman: col. 2, lines 6-7; col. 1, lines 24-35);

d) evaluating said responding messages, if any, by said first of said entities (Lehman: col. 1, lines 24-35; col. 4, lines 23-31); and

e) taking advised action by said first of said entities after said evaluating said responding message (Lehman: col. 1, lines 24-35; col. 4, lines 23-31).

Regarding claim 49, the method of claim 48, wherein said messages are exchanged over a tuple space in shared memory (Lehman: col. 1, lines 24-34; col. 2, lines 1-11).

Regarding claim 50, the method of claim 48, wherein said entities represent call processing features in a communications system (Lehman: col. 3, lines 22-31).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 27-38, 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,974,420 by Lehman et al in view of U.S. Patent No. 5,924,103 by Ahmed et al ("Ahmed").**

Regarding claim 27, a system for controlling and coordinating activities among entities in an information and process environment (Lehman: col. 3, lines 21-30) comprising:

a) a communications pathway for transmitting and receiving communications of said entities (Lehman: col. 2, line 4; col. 3, lines 61-67); and

b) a shared memory connected to said communications pathway for maintaining a tuple space on which said entities post and receive messages (Lehman: col. 1, lines 12-13; col. 3, lines 5-31),

wherein said entities include at least one entity that asserts a tuple on said tuple space signaling its intention to perform an action and asserts an anti-tuple on said tuple space for evaluating outcomes of said intention (Lehman: col. 2, lines 6-7; col. 1, lines 24-35); and at least one further entity which asserts an anti-tuple for detecting said intention (Lehman: col. 1, lines 24-35; col. 4, lines 23-31).

The Lehman reference does not explicitly state the use of discrete time intervals.

The Ahmed reference teaches said tuple space synchronized with a clock that defines discrete time intervals as reference points for operations on said tuple space (Ahmed: col. 5, lines 24-38),

The Ahmed reference further teaches the start and end times indicate a timer interval in which the tuple contains current information (Ahmed: col. 5, lines 24-38).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system for controlling and coordinating activities among entities as taught by Lehman while employing discrete time intervals as taught by Ahmed to maintain tuples with current and accurate information (Ahmed: col. 5, lines 24-38).

Claims 28-32 are rejected under the same rationale given above. In the rejections set forth, the examiner will address the additional limitations and point to the relevant teachings of Lehman and Ahmed.

Regarding claim 28, the system of Claim 27, wherein said tuples include a duration parameter for limiting the duration thereof in said tuple space (Lehman: col. 5, lines 35-43; Ahmed: col. 5, line 25).

Regarding claim 29, the system of claim 28 wherein said duration parameter is a multiple of said discrete time intervals (Ahmed: col. 5, lines 24-38).

Regarding claim 30, the system of claim 29 wherein said tuples are removed from said tuple space after said duration has elapsed (Ahmed: col. 5, lines 30-38).

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Regarding claim 31, the system of claim 27 wherein said entities are hardware devices (Lehman: col. 4, lines 10-15, 37-41).

Regarding claim 32, the system of claim 27 wherein said communication pathway is a network or bus (Lehman: col. 4, lines 15-16).

Regarding claim 33, a method for controlling and coordinating activities among entities in an information and process environment (Lehman: col. 3, lines 21-30) comprising the steps of:

a) providing a communications pathway for transmitting and receiving communications of said entities (Lehman: col. 2, line 4; col. 3, lines 61-67);

b) providing a tuple space in a shared memory and connected to said communications pathway (Lehman: col. 1, lines 12-13; col. 3, lines 5-31);

c) posting and receiving messages of said entities to and from said tuple space (Lehman: col. 2, lines 6-7; col. 1, lines 24-35) ~~synchronized to said discrete time intervals~~, wherein said messages are in the form of tuples and anti-tuples (Lehman: col. 2, lines 6-7; col. 1, lines 24-35), and wherein said entities include at least one entity that asserts a tuple on said tuple space signaling its intention to perform an action (Lehman: col. 2, lines 6-7; col. 1, lines 24-35) and asserts an anti-tuple on said tuple space for evaluating outcomes of said intention (Lehman: col. 2, lines 6-7; col. 1, lines 24-35); and at least one further entity which asserts an anti-tuple for detecting said intentions (Lehman: col. 1, lines 24-35; col. 4, lines 23-31).

The Lehman reference does not explicitly state the use of discrete time intervals.

The Ahmed reference teaches said tuple space synchronized with a clock that defines discrete time intervals as reference points for operations on said tuple space (Ahmed: col. 5, lines 24-38),

The Ahmed reference further teaches the start and end times indicate a timer interval in which the tuple contains current information (Ahmed: col. 5, lines 24-38).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system for controlling and coordinating activities among entities as taught by Lehman while employing discrete time intervals as taught by Ahmed to maintain tuples with current and accurate information (Ahmed: col. 5, lines 24-28)

Claims 34-38 are rejected under the same rationale given above. In the rejections set forth, the examiner will address the additional limitations and point to the relevant teachings of Lehman and Ahmed.

Regarding claim 34, the method of Claim 33, wherein said tuples include a duration parameter for limiting the duration thereof in said tuple space (Lehman: col. 5, lines 35-43; Ahmed: col. 5, line 25).

Regarding claim 35, the method of claim 34 wherein said duration parameter is a multiple of said discrete time intervals (Ahmed: col. 5, lines 24-38).

Regarding claim 36, the method of claim 35 wherein said tuples are removed from said tuple space after said duration has elapsed (Ahmed: col. 5, lines 30-38).



Regarding claim 37, the method of claim 33 wherein said entities are hardware devices (Lehman: col. 4, lines 10-15, 37-41).

Regarding claim 38, the method of claim 33 wherein said communication pathway is a network or bus (Lehman: col. 4, lines 15-16).

Regarding claim 42,

The Lehman reference teaches the system of claim 41.

The Lehman reference does not explicitly state the use of discrete time intervals.

The Ahmed reference teaches said tuples include a duration parameter for limiting the duration thereof in said tuple space (Lehman: col. 5, lines 35-43; Ahmed: col. 5, line 25).

The Ahmed reference further teaches the start and end times indicate a timer interval in which the tuple contains current information (Ahmed: col. 5, lines 24-38).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system for controlling and coordinating activities among entities as taught by Lehman while employing discrete time intervals as taught by Ahmed to maintain tuples with current and accurate information (Ahmed: col. 5, lines 24-28).

Claims 43-44 are rejected under the same rationale given above. In the rejections set forth, the examiner will address the additional limitations and point to the relevant teachings of Lehman and Ahmed.

Regarding claim 43, the method of claim 42 wherein said duration parameter is a multiple of said discrete time intervals (Ahmed: col. 5, lines 24-38).

Regarding claim 44, the method of claim 43 wherein said tuples are removed from said tuple space after said duration has elapsed (Ahmed: col. 5, lines 30-38).

## **REMARKS**

Applicant has filed for a request for consideration after notice of allowance. Applicant has amended and added claims with similar subject matter.

## **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart  
Examiner  
Art Unit 2155

brb *BRB*

  
SALEH NAJJAR  
SUPERVISORY PATENT EXAMINER